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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/935,446	08/22/2001	Enrique Musoll	P3840	9578

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EXAMINER

CHOUDHURY, AZIZUL Q

ART UNIT	PAPER NUMBER
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2145

DATE MAILED: 08/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/935,446

Applicant(s)

MUSOLL, ENRIQUE

Examiner

Azizul Choudhury

Art Unit

2145

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 June 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20, 22 and 24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20, 22 and 24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- 1) ☐ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>8/22/01</u> . | 6) <input type="checkbox"/> Other: _____  |

***Detailed Action***

This office action is in response to the correspondence received on June 6, 2005.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3-6, 9, 11-15, 17-18, 20, 22 and 24 rejected under 35 U.S.C. 102(b) as being anticipated by Hirata et al (US Pat No: 5056058), hereafter referred to as Hirata.

1. With regards to claim 1, Hirata teaches a packet buffering system for predictively processing data packets in a data packet network comprising: at least one input port for receiving data packets from a plurality of sources; at least one output port for sending out data packets to a plurality of destinations; a packet predictor, coupled to said at least one input port, for predicting information about a future packet based on history of a previously received packet; packet; a plurality of queues for storing packets received from said plurality of sources, and for storing said predicted information about said future packet; and a processing core, coupled to said plurality of queues, such that at least some processing for the said future packet may be accomplished before said future packet actually arrives at the system (Hirata teaches a communication prediction design. It

features input and output ports (column 3, lines 65-68, Hirata) as well as a processor for processing the packets with (column 3, lines 60-61, Hirata). The design also has buffers (queues) for temporarily storing the input packets (column 8, line 52 – column 9, line 16, Hirata). Plus, Hirata's design makes attempts at predicting the destination of packets (column 4, lines 46-50 and column 5, lines 55-62, Hirata). Such predictions are formulated from former transmit/receive processing (equivalent to the claimed history) (column 6, lines 8-14, Hirata)).

2. With regards to claim 3, Hirata teaches a system wherein the packet predictor utilizes a history record periodically updated by the system, to generate predicted data (column 5, lines 46-51 and column 7, lines 30-36, Hirata).
3. With regards to claim 4, Hirata teaches a system wherein the history record comprises characteristics of recently received data packets (Hirata's design makes attempts at predicting the destination of packets (column 4, lines 46-50; column 5, lines 55-62 and column 7, lines 30-36, Hirata). Such predictions are formulated from former transmit/receive processing (equivalent to the claimed history) (column 6, lines 8-14, Hirata)).
4. With regards to claim 5, Hirata teaches the system wherein the history record further comprises results of past predictions (Hirata's design makes attempts at

predicting the destination of packets (column 4, lines 46-50 and column 5, lines 55-62, Hirata). Such predictions are formulated from former transmit/receive processing (equivalent to the claimed history) (column 6, lines 8-14, Hirata). Past successful predictions are included in the former transmit/receive processing information hence, the claimed traits are present within the Hirata design).

5. With regards to claim 6, Hirata teaches the system wherein said packet predictor predicts specific characteristics, comprising one or more of packet type, packet flow identification, sender information, destination information, and packet size for said future packet (See Figure 7 and column 5, lines 46-62, Hirata).
6. With regards to claim 9, Hirata teaches a packet predictor system for predicting information about a future packet to be received within a data packet processor, the predicted information being processed by a processing core prior to the future packet being received, the processing reducing latency in routing the future packet to its destination, the system comprising; an input for receiving information about a first packet received for processing; a packet predictor, coupled to said input for predicting the information about the future packet based upon the information received about the first packet; a plurality of queues, coupled to said input and said packet predictor, for storing the predicted information; and a processing core, coupled to said plurality of queues. for

processing the predicted information before the future packet is received by said input; wherein by processing the predicted information before the future packet is received, latency for delivering the future packet to an output is reduced (Hirata teaches a communication prediction design. It features input and output ports (column 3, lines 65-68, Hirata) as well as a processor for processing the packets with (column 3, lines 60-61, Hirata). The design also has buffers (queues) for temporarily storing the input packets (column 8, line 52 – column 9, line 16, Hirata). Plus, Hirata's design makes attempts at predicting the destination of packets (column 4, lines 46-50 and column 5, lines 55-62, Hirata). Such predictions are formulated from former transmit/receive processing (column 6, lines 8-14, Hirata)).

7. With regards to claim 11, Hirata teaches the packet predictor system comprising a history record consulted each time a prediction is made (Hirata's design makes attempts at predicting the destination of packets (column 4, lines 46-50 and column 5, lines 46-62, Hirata). Such predictions are formulated from former transmit/receive processing (column 6, lines 8-14, Hirata)).
8. With regards to claim 12, Hirata teaches the packet predictor system wherein the history record comprises history of real packets received and processed (Hirata's design makes attempts at predicting the destination of packets (column 4, lines

46-50 and column 5, lines 46-62, Hirata). Such predictions are formulated from former transmit/receive processing (column 6, lines 8-14, Hirata)).

9. With regards to claims 13 and 20, Hirata teaches the packet predictor system wherein the history record comprises history of predictions and results of the predictions (Hirata's design makes attempts at predicting the destination of packets (column 4, lines 46-50 and column 5, lines 55-62, Hirata). Such predictions are formulated from former transmit/receive processing (equivalent to the claimed history) (column 6, lines 8-14, Hirata)).
10. With regards to claim 14, Hirata teaches the packet predictor system wherein the history record is stored in a memory accessible to the system (Hirata's design makes attempts at predicting the destination of packets (column 4, lines 46-50 and column 5, lines 46-62, Hirata). Such predictions are formulated from former transmit/receive processing (column 6, lines 8-14, Hirata)).
11. With regards to claim 15, Hirata teaches the packet predictor system wherein said packet predictor predicts specific characteristics, comprising one or more of packet type, packet flow identification, sender information, destination information, and packet size (See figure 7 and column 5, lines 46-62, Hirata).

12. With regards to claim 17, Hirata teaches the method for reducing latency in packet processing within a packet processor, comprising the steps of: receiving packets from a plurality of sources; developing in and storing a history of packet information from the received packets; future information about future packets from the history; and processing the future information about the future packets before the future packets are received; wherein by processing the future information about the future packets before the future packets are received, latency in delivering the future packets to their destinations is reduced; and wherein the information comprises one or more of packet type packet flow identification, source information, destination information, and packet size (Hirata teaches a communication prediction design. It features input and output ports (column 3, lines 65-68, Hirata) as well as a processor for processing the packets with (column 3, lines 60-61, Hirata). The design also has buffers for temporarily storing the input packets (column 8, line 52 – column 9, line 16, Hirata). Plus, Hirata's design makes attempts at predicting the destination of packets (column 4, lines 46-50 and column 5, lines 55-62, Hirata). Such predictions are formulated from former transmit/receive processing (equivalent to the claimed history) (column 6, lines 8-14, Hirata)).

13. With regards to claim 18, Hirata teaches the method wherein the packet processor is coupled with a data packet network (Column 3, line 57 – column 4, line 7, Hirata).



14. With regards to claim 22, Hirata teaches the method wherein said step of processing is abandoned if it is determined not to agree with the real data once it arrives (Figure 9 and column 7, lines 44-46, Hirata).

15. With regards to claim 24, Hirata teaches the method wherein if some of the results from processing the predicted future information are wrong they are abandoned, and results which are correct are retained, to reduce processing for an arriving packet based on the prediction (Hirata's design makes attempts at predicting the destination of packets (column 4, lines 46-50 and column 5, lines 55-62, Hirata). Such predictions are formulated from former transmit/receive processing (equivalent to the claimed history) (column 6, lines 8-14, Hirata). In addition, the successful predictions are stored in a table (stored in history) otherwise no storing step occurs (not stored in history) (column 6, lines 1-29, Hirata).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 7, 8, 10, 16 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirata et al (US Pat No: 5056058), hereafter referred to as Hirata.

16. With regards to claims 2, 10 and 19, Hirata teaches the system wherein the data packet network is the Internet network (Hirata describes a protocol on an information communication network system (column 3, line 51, Hirata). However, Hirata does not specifically disclose the Internet network. Official Notice is taken that the Internet is an information communication network system. It would have been obvious to one of ordinary skill in the art at the time of the invention to use the invention of Hirata on the Internet network in order to increase the speed of communication on the Internet).

17. With regards to claim 7, Hirata teaches the system comprising a packet router (Hirata discloses the use of a protocol on communication control equipment (column 3, line 55, Hirata). However, the specific use of a packet router is not disclosed. Official Notice is taken that a packet router is equipment that transmits and receives messages on a network. It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the invention of Hirata on a router in order to increase the speed of messages in a network).

18. With regards to claims 8 and 16, Hirata teaches the system comprising a data server (Hirata teaches the use of the design on communication control equipment that is described as having a medium access controller, memory for storing programs and data, and a local processor (column 3, line 65 – column 4, line 6), but the use of servers is not expressly disclosed. Official Notice is taken that a server is a computer running administrative software that controls access to the network and its resources; a file server may contain an archive of data or program files. It would have been obvious to one of ordinary skill in the art, at the time of the invention to implement the invention of Hirata on a data server in order to increase the speed of communication with the data server).

### ***Response to Remarks***

The amendment received on June 6, 2005 has been reviewed but is not deemed fully persuasive. In the June 6 correspondence, the independent claims were amended quite considerably. However after reviewing the Hirata prior art again, it was determined that the claimed features still lacked novelty over the Hirata prior art. The 112 rejections were removed in response to the corrected 112 errors. However, no major issues were expressed within the applicant's representative's remarks besides the mention of the newly amended material. The rejections within the office action have thus been revised in an effort to better illustrate how the claimed invention is viewed to lack novelty against the Hirata prior art.

***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

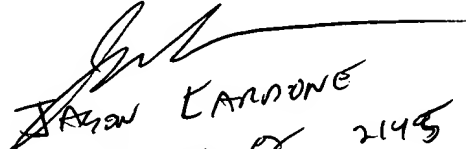
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Azizul Choudhury whose telephone number is (571) 272-3909. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Valencia Martin-Wallace can be reached on (571) 272-6159. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2145

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AC

  
Brian L. Carbone  
Primary of 2145